

ARCHITECTURE

VOL. XIV.

SEPTEMBER 15, 1906.

No. 3

ARCHITECTURE, conducted by a Board of Architects in the interests of the profession, is published the fifteenth of every month by FORBES & COMPANY, LTD., 160 Fifth Avenue, New York. Its opinions on technical subjects are either prepared or revised by specialists.

PRICE, mailed flat to any address in the United States or Canada, \$5.00 per annum, in advance; to any foreign address, \$7.00 per annum in advance.

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ENTERED at the New York Post Office as second-class mail matter.

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PROFESSIONAL COMMENT.

NEW YORK, AUGUST 17, 1906.

To The Editor, "ARCHITECTURE"

SIR:—We beg to call your attention to an editorial in your issue of August 15, 1906, reading as follows:—

"According to the newspapers, the board of Apportionment has authorized an expenditure of \$200,000 for 'repairs' on the Hall of Records. The building is not yet occupied, and the public have been wondering how this amount of money can be spent in 'repairs' upon a structure that is not yet turned over by the contractor."

Your editorial is untrue, as no expenditure has been authorized by the Board of Apportionment for any repairs on the Hall of Records. We are the Architects for the Building, and if such an expenditure were authorized for "repairs," it would be a severe reflection upon us.

Yours,

HORGAN & SLATTERY.

FOR some unaccountable reason the matter of the new building code has been dormant during the summer, but with the approach of the fall season it is well to remind the building interests that there is nothing between this much needed reform and its consummation but the appointment of the commission, and that the Building Committee of the Board of Aldermen have all the authority necessary for this purpose under the resolution now approved. Already various interests which are likely to be affected by the new code are waking up. For instance, the Sheet Metal Workers in their recent convention in Indianapolis, quite naturally "heartily commended the recommendation that only tile, slate and metal be permitted by the code of New York City for roof coverings within its limits." This is all very well and may be desirable, but it eliminates certain other classes of roofs which are extensively used. It also emphasizes the importance of selecting men for the proposed commission who shall be free from any suspicion of being interested in any special interest. Previous codes in New York have suffered greatly from this objection, but the system of selection to which the aldermen have committed themselves, and which has already been outlined in ARCHITECTURE, should insure a body of men to serve in the commission who are free from this taint. It is also hoped that the new code will prevent certain abuses which have been prevalent in the enforcement of the law, by a requirement that each superintendent of buildings shall, if connected with a firm engaged directly in building trades, actually as well as legally sever his connection with that firm.

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Architects of To-Day.

MR. J. R. HARRIS.

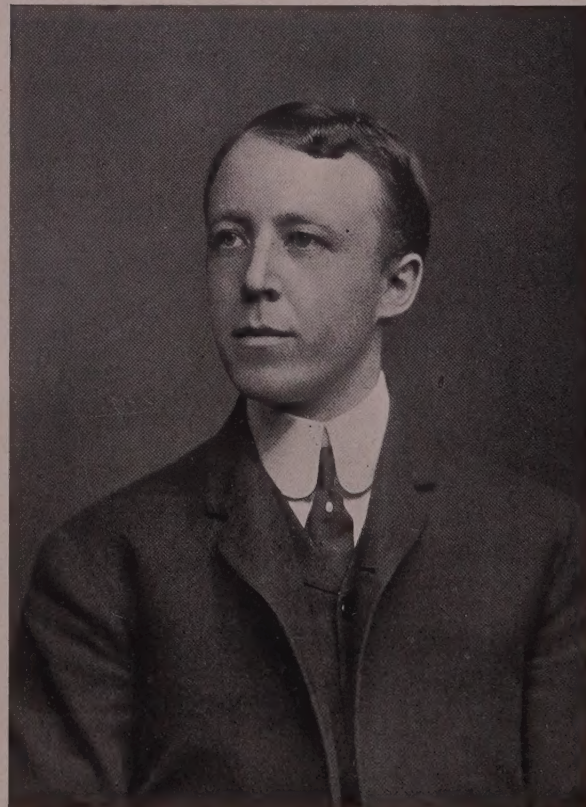
Although the proposition that the superintendents should be professional men would undoubtedly work injustice to a large class of honest men in the building trades, such a system would go far toward eliminating the evil which has been too common in New York, where the power and influence of official position has frequently been used to force contracts in specific directions. In fact it has not been infrequent that incumbents of the office have looked upon the performance of their official duties as of secondary importance to the particular interests which they served. It is true that this might still be done by office holders who are professional men, but past experience has proven that this has not been the case.

AMONG the thousands of apartment houses built in New York City during the past decade, few are so built as to appeal to the genteel poor. The wealthy are well provided for in high priced houses, and the workmen are remembered not only in houses erected by ordinary speculators, but in model tenements as well. But the poor man of good breeding—where shall he go? Thousands of young clerks, draftsmen, teachers and the like, married men with possibly one child, who wish to secure a four or perhaps five-room apartments in good surroundings, have no place to go. They must face the alternative of high priced bachelor apartments or buildings which are tenements in fact as well as in name. Even the moderate priced apartments are built with more rooms than such families require. Here is a chance for a philanthropist to help a class quite as deserving as the college professors for whose old age Mr. Carnegie's pension fund has already provided.

NEW YORK designers and all lovers of early American architecture of the colonial type spend days in search of the best expression of our early work in the builders art in roaming through

Maryland and Virginia, but seem to neglect a mine of good things in the pleasant valley of the Hackensack at their very doors. Few sections of the country have so many Eighteenth Century dwellings still in existence. Most of them are the story and a half, gambrel roofed type, with the walls built of native stone, showing a decidedly Netherlandish adaptation of the Georgian method. They were the homes of humble folk, and the details were not evolved by cabinet makers of particularly good training, as was the case with their brothers in more aristocratic sections, but they are charming in outline, and would furnish the best kind of inspiration to the modern cottage designer. One New York architect has realized their possibilities, and made a most delightful summer home by modernizing one of these old Dutch farmhouses

THE Municipality Art Committee has evidently taken no summer vacation as in two important instances they have made their power felt in a manner which bodes well for the artistic interests of the city. The Committee somewhat astounded the public officials who were preparing for the opening of the Hendrick Hudson Memorial Bridge, which is to span Spuyten Duyvil Creek and connect Riverside Drive with the Bronx, by refusing to approve the design submitted, so that these officials now state that the celebration will have to be held without the principle event. In the second instance the Commission sat down hard on the new designs for the new Queens County Court House, the principle objection, according to President Bermel of Queens, being that the designs were "too beautiful." Mr. Bermel threatens reprisals, and says that it will be all right when the mayor gets back into the City Hall, but in the meantime at least, the disapproval stands. Mr. Bermel



Architects of To-Day.

MR. F. E. NEWMAN.

is quoted as saying further "that a man named Cook objected that the said plans were too varied." One of our contemporaries states that Mr. Cook is the sculptor of the Art Committee, but this is somewhat in error, as it is, of course, Mr. Cook of Babb, Cook and Willard.

A MOVEMENT is on foot among artists and architects which will doubtless materialize during the coming winter to erect some permanent memorial in recognition of the artistic service rendered to the city of the late Stanford White, to whose firm the old statement, slightly altered, has been applied, that they "found New York brown stone and red brick, and left it white brick and terra cotta."

AN article on French cathedrals in the July *Century* by Elizabeth Robbins Pennell gives occasion for congratulation to all lovers of architectural illustration in that it shows that the author's talented husband has returned to the old style in which he earned the well deserved place of one of the great, if not the greatest of modern illustrators of architectural subjects. The sketches of Notre Dame, of St. Denis and of St. Etienne-du-mont display all of his old time vigor and lightness of touch, and none of the sunless, Dureresque line which he has so much affected in the past few years and which was so unsuitable for the modern process plate. The article itself was decidedly reactionary, and spoke of the "dead art of architecture," a soft impeachment which we admit where ecclesiastical art is concerned, although architecture is very much alive when it comes to skyscrapers and Carnegie libraries, buildings which express the civilization of our times quite as thoroughly as the French cathedrals did theirs.

THE reinforced concrete office building has come somewhat sooner than was expected, and architects Radcliffe and Kelley are about to erect such a building in West 39th St., in which the exterior is to be logically treated in the same material instead of facing it with brick. With the popularity of this construction architecture is faced with the first radically new problem in design which it has had to tackle since the advent of the skyscraper. In fact, this problem is much more radical than that of the skyscraper, for in one case it was simply a question of proportion, whereas concrete presents a basic difference. It is axiomatic that architectural design must be logical to be successful, and in dealing with a plastic material none of the historical styles are logical. It is evident therefore that design in concrete to be original must be evolved in such a manner that its plastic surface will tell its own story, and the inspiration to draw upon may possibly be found in the new Secession movement in Germany.

WHILE New York continues to grow into a city of skyscrapers, the little city of Springfield, Mass., has restricted the buildings within its limits to a definite height of 100 feet. Agitation for a similar restriction in New York seems to have received its quietus and the people really glory in the thirty and forty story towers now being erected. It is strange that this agitation has ceased, for were it enacted into law it would undoubtedly raise the value of millions of dollars worth of property within the city; and as people in general are actuated by self interest, and comparatively few property owners hold land in the skyscraper district, it would be decidedly advantageous to the average property holder if such a restriction were put in force. If the plans of the City Improvement Committee are some day put in operation, and better circula-

tion made possible, such a restriction would be decidedly advisable, as with the citizen's ability to travel from place to place more quickly there would be no necessity for the congestion to which the skyscraper is the logical answer.

MISTAKES IN WATERPROOFING.*

MISTAKES in waterproofing are the result, mainly, of three causes:

- 1st. Faulty design of the thing to be waterproofed.
- 2nd. Use of improper materials.
- 3rd. Imperfect application.

FIRST—FAULTY DESIGN OF THE THING TO BE WATERPROOFED.

Waterproof engineering is wholly a modern profession. Its field is the designing of structures to properly receive waterproofing. In the broader sense, its mission is the safety and preservation of structures, and the conservation of public health.

Waterproofing is, itself, practically a modern art. Only in recent years has there been any earnest effort to place it on a scientific basis and deduce any system of practice—in part evidence of which is the origination of our committee on waterproofing. Old-school methods are as unfitted for present day construction as the bridges of twenty years ago are unfitted for the modern locomotive.

The question of design may not be exactly within the province of the Society, but as design, method and material are intimately related, and as the waterproofing work of the society is just beginning, a paper of a practical turn and bearing on the state of the art, as it were, may, at this time, be of some interest.

The majority of engineers and architects still follow old-school methods, believe that concrete is waterproof—especially if it be reinforced—and give no special attention to the importance of design. A faulty design will invalidate the best methods and materials. This is particularly so in bridge work. If the bridge be not properly designed to receive waterproofing, it is almost impossible to make the deck or floor watertight.

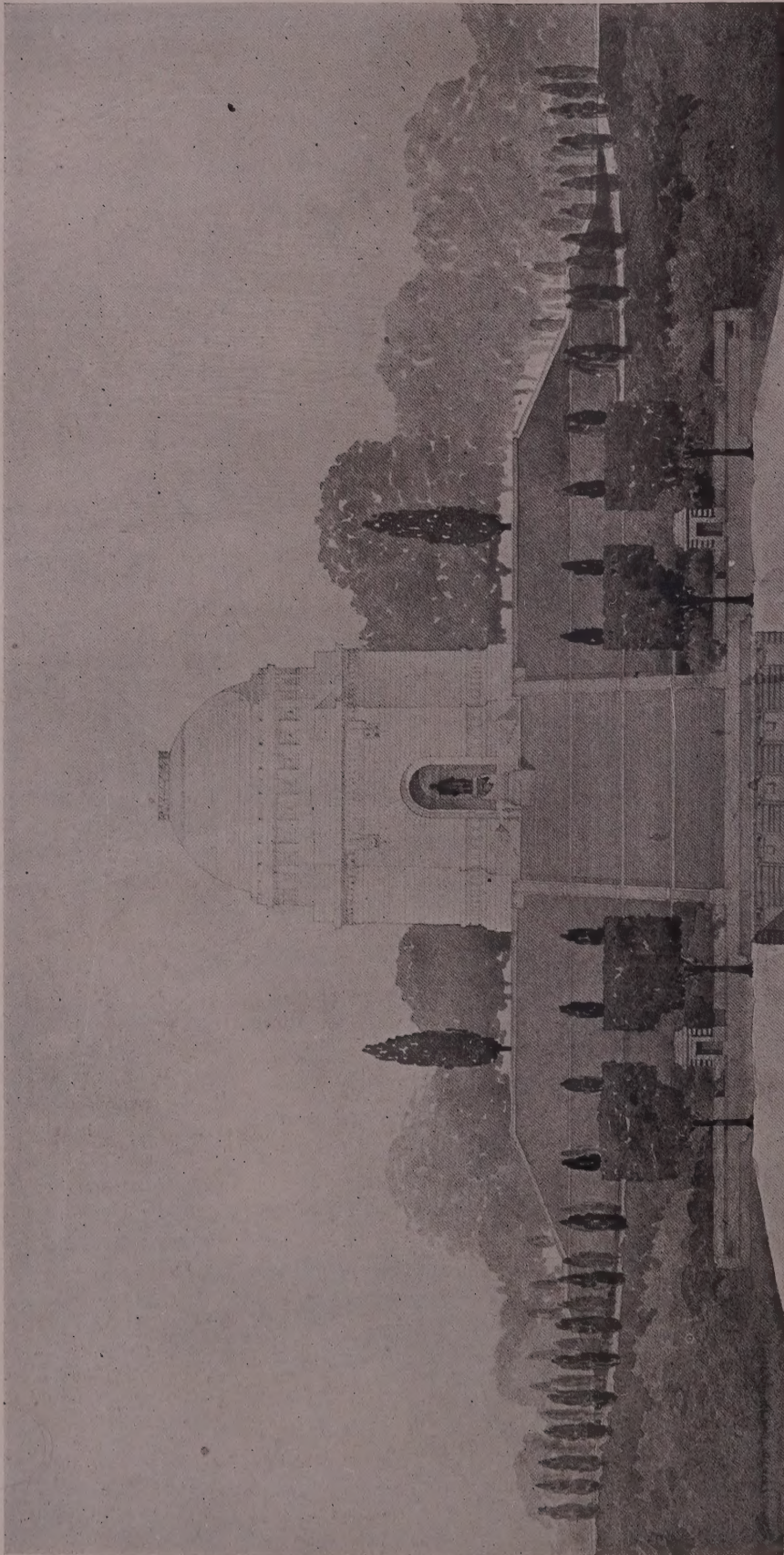
It is a mistake to use a set design or specification for general work. Each condition has its characteristics, and should be carefully considered, especially with reference to the nature of the climate, water, soil, rock, water-pressure, use of the structure, etc., etc.

A prominent New York architect made the mistake of using on the exterior surfaces of the walls of a twenty-two story office building, a waterproofing material simply because it had been used fairly successfully on the bottom of a reservoir. His mistake was, in the end, costly.

In another mistake, the floors in a cold storage building, with a constant temperature a near zero, were designed to be waterproofed with materials similar to those used in an ordinary warehouse where the temperature ranged from near zero to 90° F. There had been no thought of making the method and consistency of the products suit the conditions, and the materials used in the cold storage floors turned, in time, almost to powder. In another mistake, an engineer used a reservoir design and method for the foundations of a twelve story office building near tide water. The design being radically inappropriate, the sub-basement floor and its waterproofing were broken through when the building was up seven floors. Within twenty-four hours the water was fifteen feet high in the basement. It cost \$10,000 to remedy this mistake.

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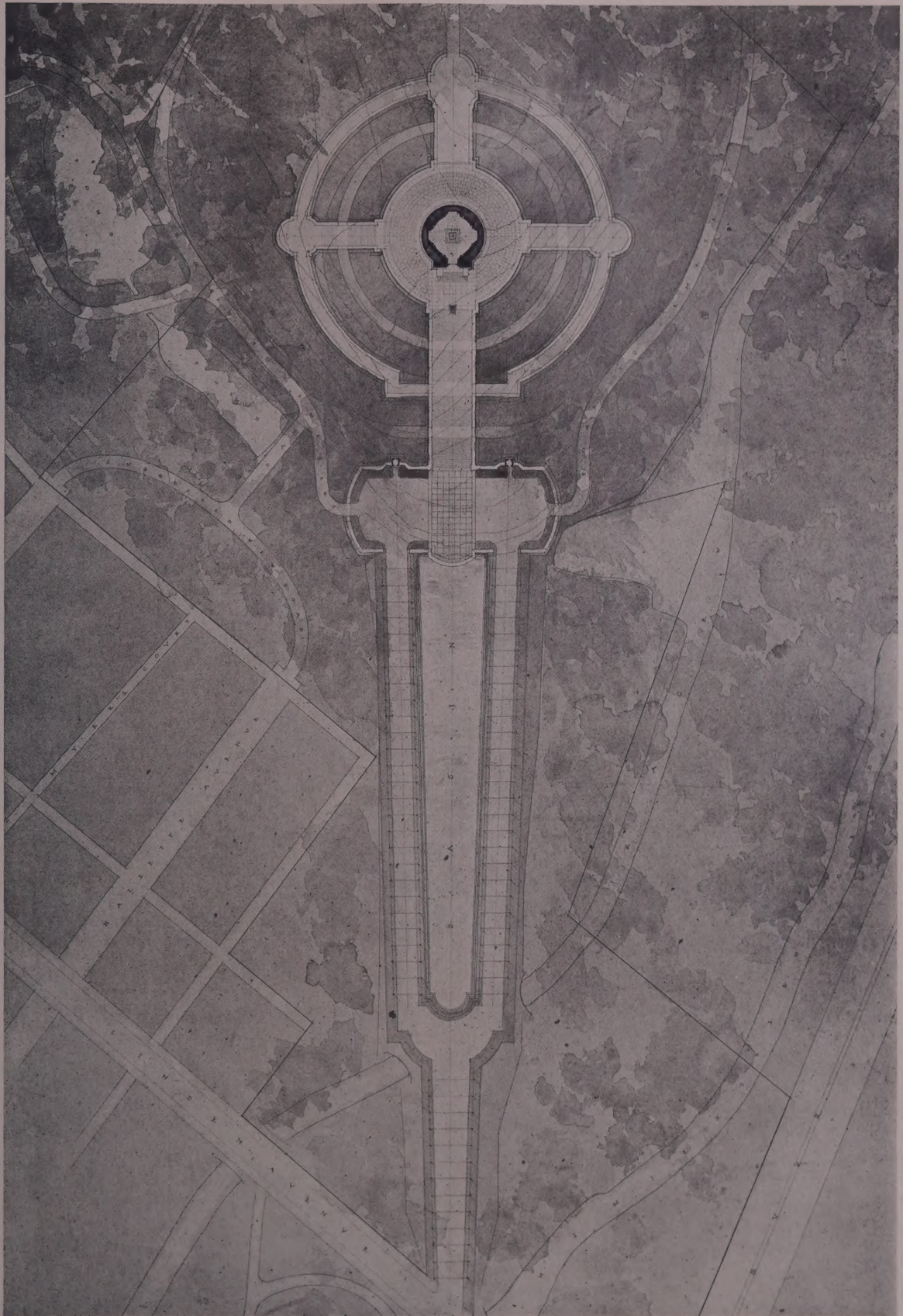
* A paper read at the annual meeting of the American Society for Testing Materials at Atlantic City, by Mr. Edw. W. DeKnight.



PERSPECTIVE, MCKINLEY NATIONAL MEMORIAL, CANTON, O.

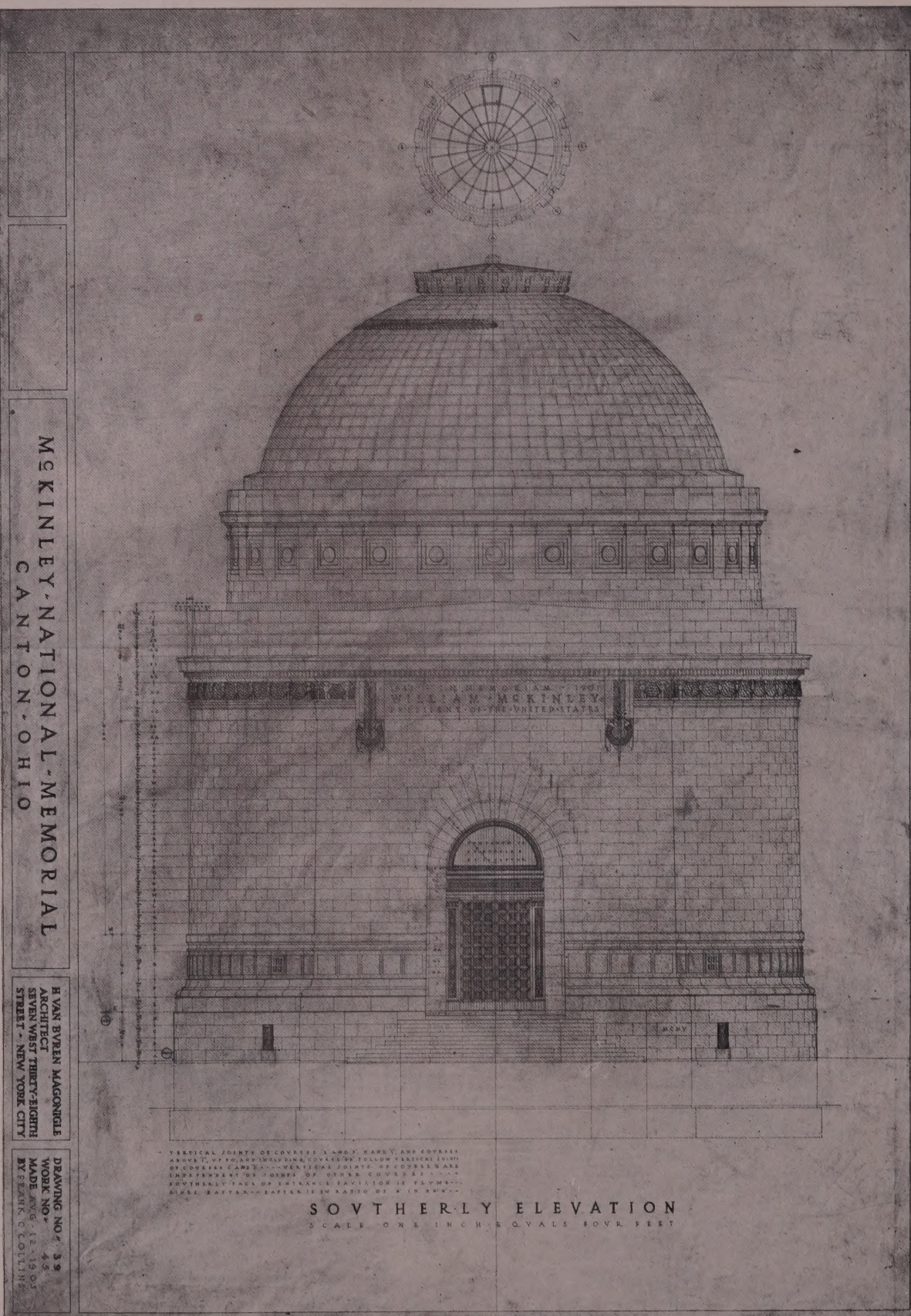
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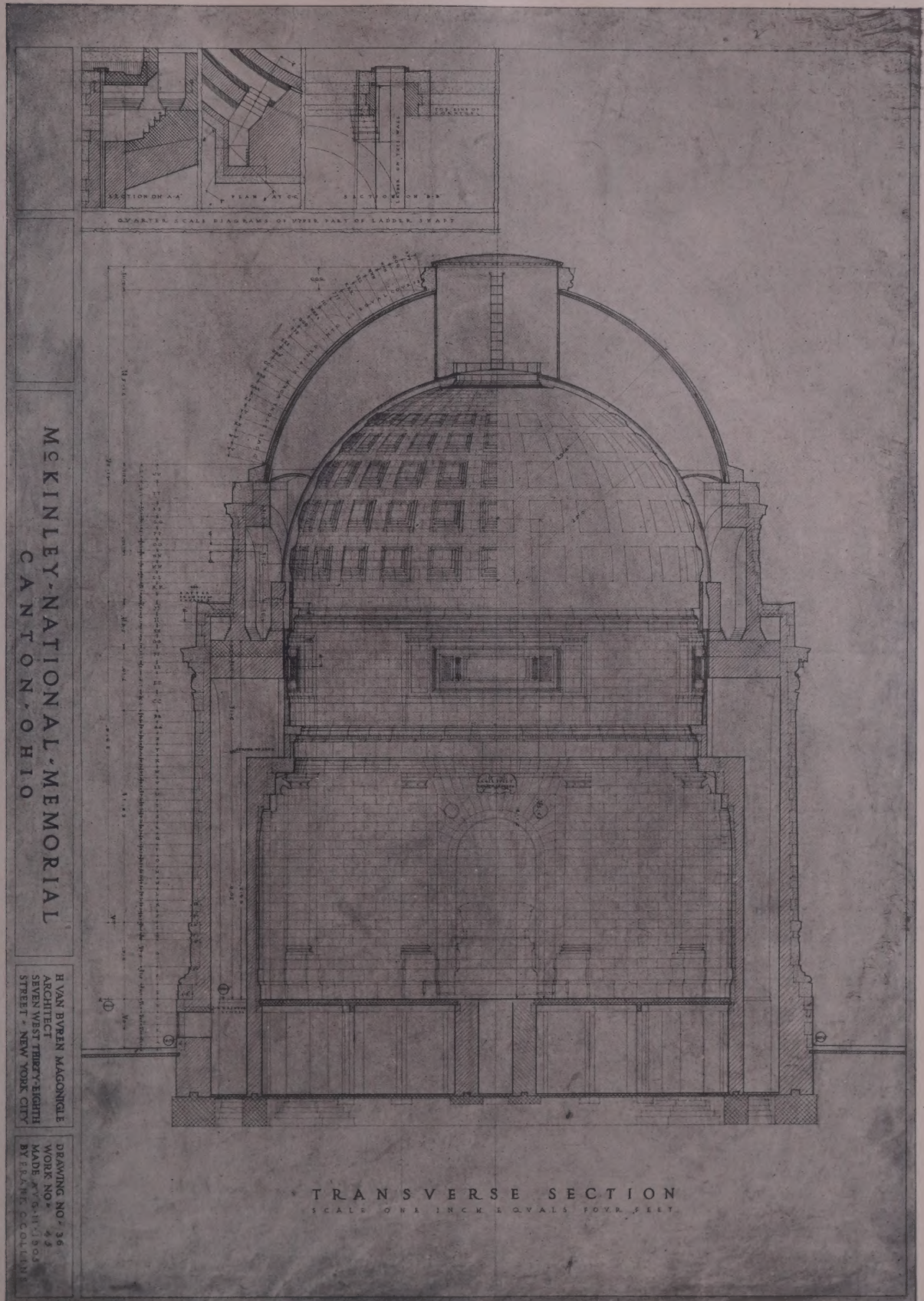
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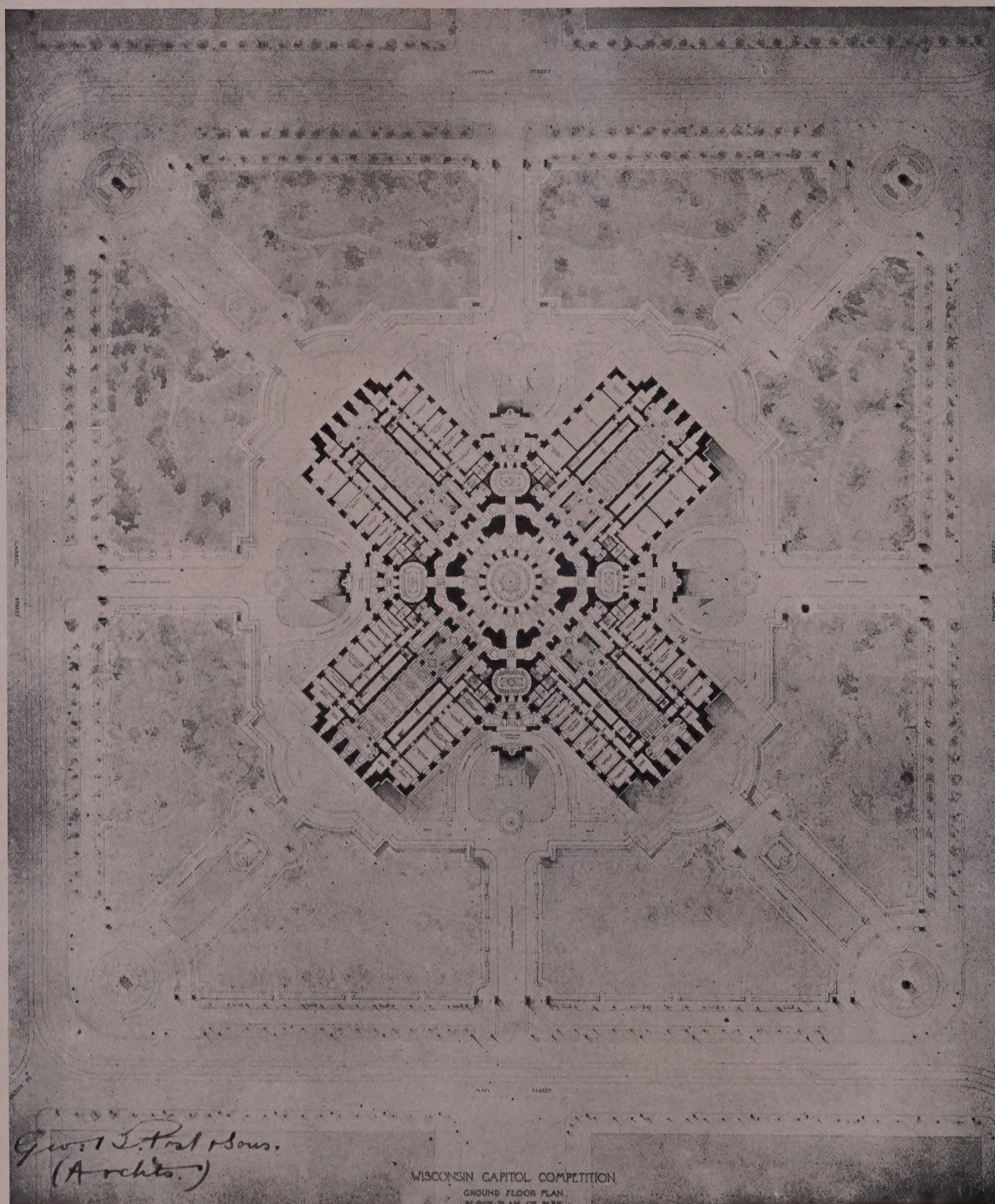


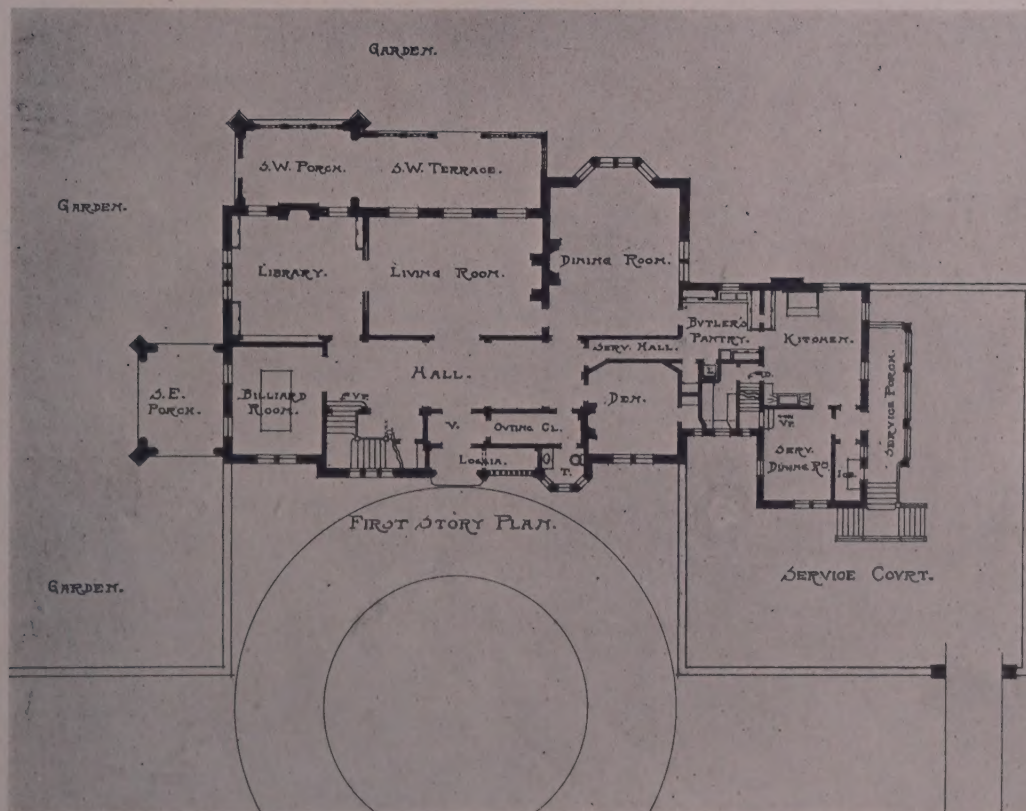
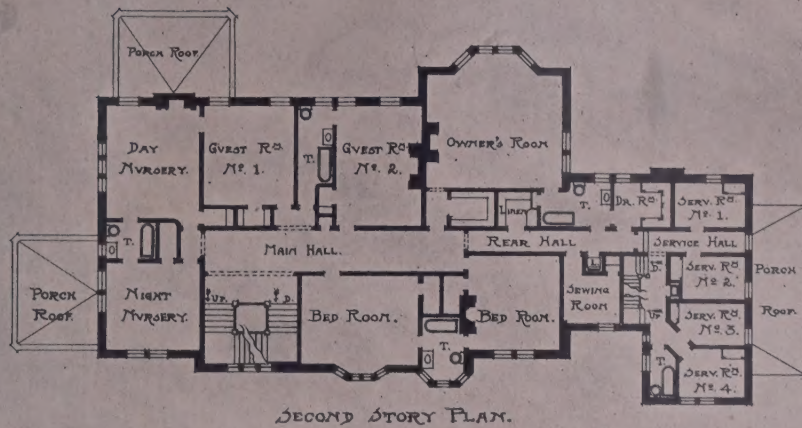
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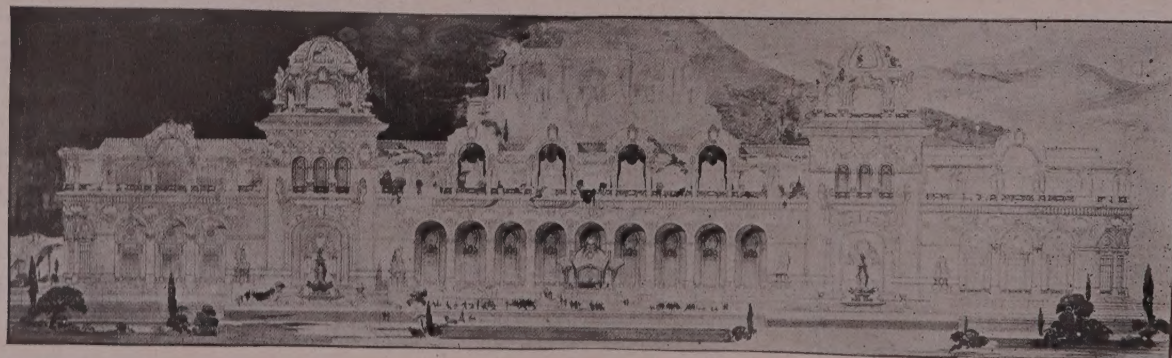
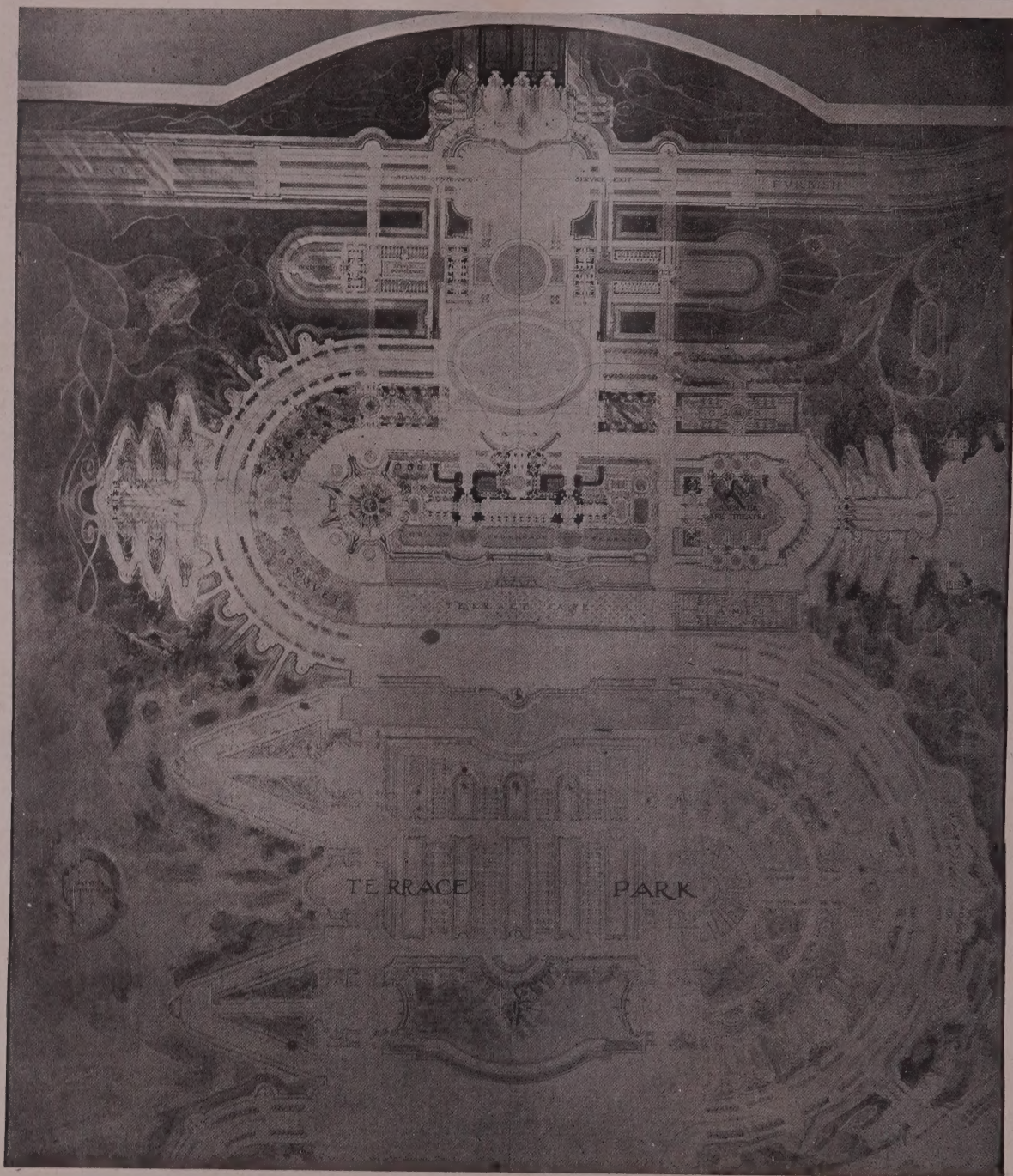
H. Van Buren Magonigle, Architect.











PARIS PRIRE COMPETITION, BEAUX ARTS SOCIETY.

Placed I. F. C. Hiorns.

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In another mistake the design was faulty in improperly grading the surface carrying the waterproofing, which, by missing the outlets by a fraction, allowed sufficient back water to find its way inside, instead of outside a magnificent granite structure. This mistake will likely cost nearly \$40,000. A waterproofing engineer who would have, at a glance, noticed the error in the drawings, would certainly in that case have been worthy of his fee.

In another mistake, a wrong design for concrete arch viaduct waterproofing caused the reservoirs to be filled with water which could not escape through weep pipes stopped by cementation. The freezing of the water burst the concrete. After four years it was necessary, to save the viaduct, to properly waterproof it. This mistake was exceedingly costly.

In mill protected property—factories, warehouses, etc.—the losses from water are far greater than the losses directly from the fire. The mistakes in designing floor waterproofing have, in this respect, cost hundreds of thousands of dollars. Yet it is practically a simple thing to design a floor so that it will perfectly retain water to the depth of several inches, and make it independent of and also a protection to every other floor. Consider for a moment that phase of waterproof engineering relating to the public health. Germs thrive best in damp places. A wet wall is an abomination. A damp, wet cellar is the result of nothing less than criminal carelessness. It breeds vermin and disease through the entire habitation. More throat and lung diseases and fevers are the result of damp cellars than we now estimate. It should be a requirement of law that the foundation of every habitation, especially residences, be set in virtually a waterproof box, no matter whether the conditions seem to require it or not. Aside from the factor of safety to a foundation, and the waterproof protection afforded by waterproofing, it is of inestimable benefit because of its insulating value.

A leaking, dripping, rapid transit subway or tunnel is a menace to public health. Millions of people daily pass into, out of and through these subterranean streets. No sunlight ever enters them, and the very essence of their value lies in keeping them clean and dry. Their very preservation, aside from the point of sanitation, depends wholly upon protecting them against the corroding, disintegrating, destructive percolation of water. If one-tenth of the care and consideration expended on concrete and steel were given to waterproofing—the sole and only thing which protects and makes, under the conditions, the concrete and steel of any value—we would approach nearer the perfect rapid transit tunnel.

The mistake is always in asking, not how much, but how little waterproofing can be used. Contemplate using but four layers of the usual waterproofing materials in work so important, when not fewer than six or eight should be used. Nothing in construction work pays better than good waterproofing. Insufficient, weak, defective waterproofing is a thousand times worse than no waterproofing. The vital work of tunnel waterproofing is, as a rule, done half-way—with insufficient headroom or other provision for properly installing the waterproofing. The usual reason is that tunnel owners, through false economy, fail to make the necessary appropriation. At the end of ten years, they will regret not having doubly provided for and reinforced the entire waterproofing—bottom, sides and top.

The electrification of tunnels demands a dry tunnel. The *New York Herald* of the 9th inst, reports, from abroad, that because excessive dampness in the Simplon Tunnel, the system of electrification has been so seriously affected as to necessitate radical changes.

SECOND—USE OF IMPROPER MATERIALS.

The writer firmly believes that no material should be used for waterproofing which is not *elastic*. He also as firmly believes that no material should be used for waterproofing which becomes hard or vitreous. These two facts seem so self-evident that they will in time, no doubt, be taken as accepted principles.

There is in all nature, no waterproofing which is *hard*.

The writer thinks it a serious mistake, therefore, to attempt to waterproof concrete by hardening the surface, or by using thereon a cement plaster. We know that this method of attempting to waterproof, possesses attractive features which appeal to many engineers and architects; but not withstanding this fact, our personal opinion is that these features are misleading. The writer is a representative of the School of Elastic Waterproofing as opposed to the school of hard, vitreous or *rigid* waterproofing. The writer—who is expressing, based on tests and general experience, his own opinions, for which of course the Society is in no sense responsible—is very sincere in opposing the principle of rigidity in waterproofing, which he thinks is dangerous and will, in practice, eventually end disastrously. It is not opposition to material but to *method*.

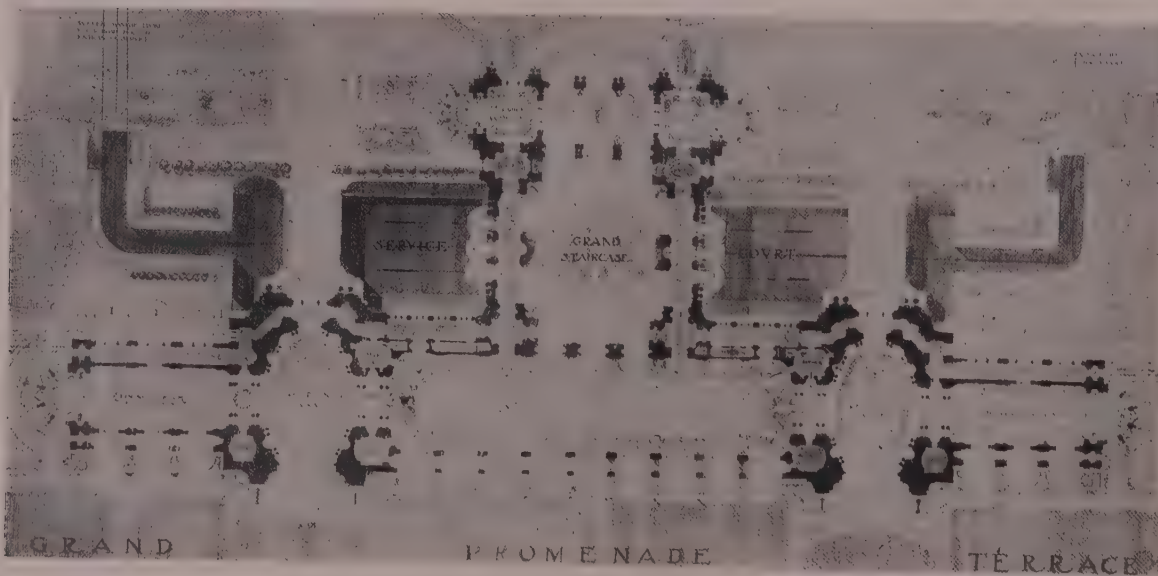
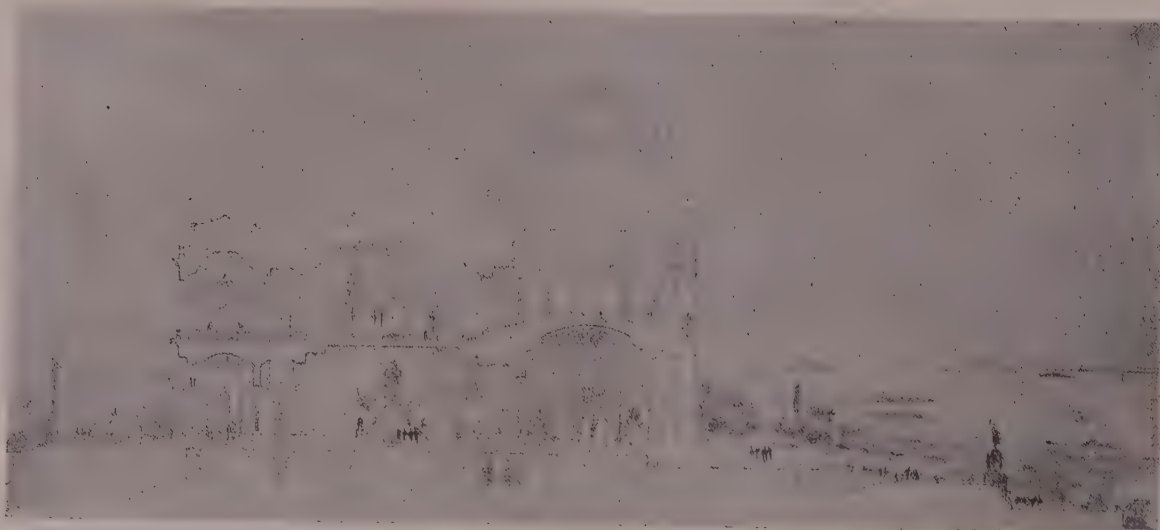
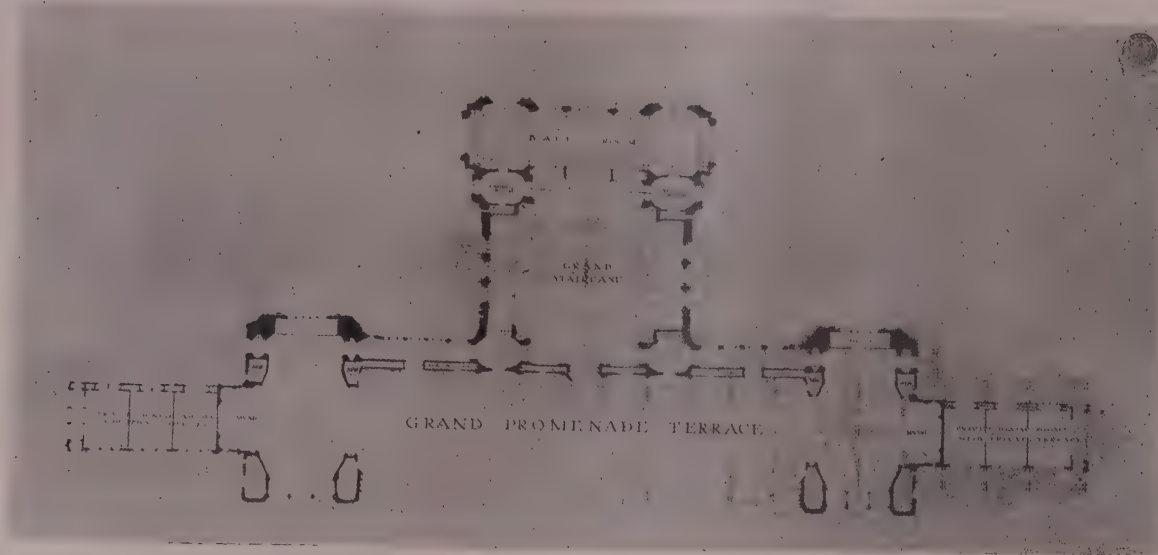
The fact that the method may have in certain cases served well for several years misleads one into using it for permanent work. By the very nature of a hard surface, that surface *must* serve for awhile, but also by that very hardness will the waterproof value of the surface be destroyed. Waterproofing is not what it is to-day, but what it is many years hence.

We are told that the hardening process or the cement plaster, method, must be applied to the inside surface of the wall, where it can be easily reached and the cracks patched. Patching is not perfection. Waterproofing must *not* crack; if elastic, it *will* not crack. Anyone recommending the application of waterproofing on the interior surface of a foundation wall certainly knows little of the right theory of waterproofing. It is against common sense and the logic of things to place the waterproofing in front (where in time it can be shoved off) of the line of resistance (the wall) instead of behind it. One of the chief uses of waterproofing is to keep the water entirely from the wall—instead of allowing it to come to and through it—and by capillarity work up and saturate the entire wall,—and in the course of years press off the hardened cement, (or even paint) or coating on the other side, which it must finally do by the very law of nature.

Another thing,—water should not be fought. It must be led. Waterproofing is part of the general scheme of drainage. Its purpose is to check water, to lead it and direct its flow naturally to some point where it can be disposed of through properly arranged drains. Water will always find the weakest spot in the strongest cement, though it may travel a long way and take a long time to do it. The cement plaster theory seems to have no bearing whatever on drainage. It means the fighting of water—and from the wrong side of the wall. The hardness of the plaster may keep back water for several years, but it must in time come through and and the cement come off.

Even though the coating or the cement be placed on the *outside of the wall*, where it then cannot be readily reached to patch cracks, it will, in the majority of cases, eventually crack because, being set, hard and *rigid*, it cannot accommodate itself to contraction and expansion, etc. It could not possibly be used on a bridge floor. The vibration would destroy it. Nor can it be used on a roof or an arch.

(Continued page 161)



(Continued from page 159.)

It may be possible to make a cement briquette impervious to water but it is impossible to extend this briquette into monolithic form and obtain permanently watertight results. A laboratory test of briquettes in this respect, or the test of a specially treated cement box treated with water and remaining watertight,—while showing that cement in itself can be made impervious to water, is not, the writer believes, of any real value for practical work. The conditions are altogether different. Masses of cement are subject to certain climatic changes, shocks, jars, vibrations, settling, expansion and contraction, which will negative any test of the waterproofness of simply the specially treated cement itself in small, briquette form. We condemn not a material, but a *method*, and judge it not by laboratory experiments or exceptional cases where it has served, but from the viewpoint of existing conditions and general work.

We believe that the principle of rigidity in waterproofing goes backward instead of forward. Mastics (composed of asphalt or coal tar pitch mixed with sand, etc.) are, for example, more yielding for waterproofing than cement coatings. Yet experience shows that almost invariably even mastics will, in cold weather, crack clear through with any settling, or expansion or contraction.

Burlap is frequently incorporated to prevent this very cracking; but experience also plentifully shows that this method—not the material, please note—is not dependable, because cracks will still occur and the burlap, not being waterproof, lets, of course, the water pass through. One of the greatest buildings in the world was seriously damaged by this burlap-reinforcement method. In many cases, tar paper is used instead of burlap.

There being in all nature no waterproofing which is hard or rigid, the *elastic* method of waterproofing seems to be as near a *natural* waterproofing as it is possible to devise.

An elastic waterproofing is not confined to one, but may be composed of many suitable materials. It may be described as follows:—

It should resemble a membrane or skin—be, in itself, i. e., in one sheet, absolutely impervious to water; be flexible, tough and elastic; be made of materials specially made to withstand the injurious action of water and all underground conditions. As many sheets or layers of this impervious membrane or skin should be cemented or veneered together, as the conditions require. This stratum of waterproofing when in place must be independent of,—a thing apart from,—the surface or thing waterproofed, which may vibrate or settle, twist or crack, expand and contract, without in the least affecting it, exactly as is the hide of a horse or the skin of one's hand free and independent of the surrounding tissue so that it may readily and naturally yield to every move of the body or the hand. This principle of elasticity coupled with independence of movement, in waterproofing was termed by the writer some time as the "Improved Membrane Method," to distinguish it from the old-school process of sticking the waterproofing fast to everything to be waterproofed.

It is a question of method, and, as can be readily observed, is diametrically the opposite of the principle of rigidity in waterproofing—no matter what may be the materials.

THIRD—IMPERFECT APPLICATION.

A common and serious mistake under this head is in attempting to do waterproofing with incompetent inexperienced men. The average contractor will try to do the work with his own men, usually ordinary laborers or will sublet it to a roofer. Roofing is not water-

proofing. The average roofer thinks he knows how to waterproof, but unless he has many times had the actual experience he knows really little of good waterproofing. It takes more time and patience than roofing—the method of applying the materials is quite different,—and if rightly done should receive much higher pay than roofing, which is ordinarily a very simple and easy operation. Waterproofing, however especially waterpressure work, requires not alone skilled labor, but frequently considerable engineering skill.

In applying waterproofing, success depends upon the *perfection of every detail*. The best materials, imperfectly applied, are worthless. The smallest hole caused by a dropped axe, crowbar, or other tool unseen and covered, may, after the pumps are stopped, ruin the entire work.

It is a mistake to not place on the waterproofing work so as to watch it constantly, an inspector who thoroughly understands waterproofing. An inspector who does not understand waterproofing,—but who might understand roofing,—is of no real value.

It is a mistake to leave the work to the contractor. A waterproofing specification should be explicit and clear in every detail.

The preparation of the surface to be waterproofed—so that it be perfectly *smooth*, etc.—is important; also the careful protection of the waterproofing until it is completed and until the permanent protection is placed upon it. A very serious mistake is in not properly sloping a flat surface to drains. Water must be kept moving.

Every waterproofing specification should close with the strict injunction that,—the waterproofing must be done only by experienced and expert waterproofers.

THE PEACE PALACE COMPETITION.

IT is not the intention to deal again with the history of the Peace Palace competition, but as it will probably not be long ere the Carnegie Board will decide on the building, we think it our duty to call attention to the fact that, in our opinion, schemes have been premiated which do not entirely adhere to the conditions of the programme.

The faults of the various schemes are as follows;—(1) An excessive transgression of the cost, for, though no estimate has been asked, it may be stated with certainty that there has been kept no account of the cost. (2) A transgression of the limitations of the site indicated on the site plan, while Article 13 of the programme prescribes a certain limitation. (3) A deviation from the prescribed sizes and positions of some apartments stated in Article 14. (4) Another treatment of the drawings than prescribed in sub h of Article 2.

Article 5 of the programme says: "If any competitor does not duly adhere to any of the stipulations of the programme his scheme is excluded from any award." Article 8 says: "The members of the jury have entirely agreed to be bound by every stipulation of the programme of the competition."

In consequence of these facts, there is, in our opinion, reason to doubt whether the decision of the jury is illegal, an opinion in which we have been strengthened by the conclusion of our judicial adviser, who says: "By the programme a judicial bond has been created between the Board of the Carnegie Foundation and the different competitors. According to article 5, any project which does not duly answer to the stipulations of the programme, ought to be excluded from any distinction. If the Board of the Carnegie Foundation does not adhere to these stipulations it certainly ought

(Continued page 164.)

THE SCHOOLS OF ORNAMENT.*

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Henry II.

Born 1519, died 1559. Goujon, de l'Orme, Bullant, Pilon, Lescot.

SON of Francis I, Henry II was King of France from 1547 to 1559. Catharine de Medici became his wife in 1531. Upon designs of this period the attributes of Diana of Poitiers, his mistress, occur, together with the king's monogram and the royal coat of arms. The crescents are attributes of Diana the goddess, and in this triple intertwining, of her of Poitiers, while D and H are often intertwined in the familiar monogram of Diana and Henry.

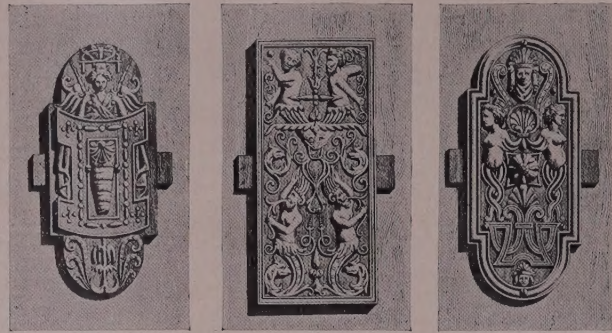
The cartouche in this school is often used in a formal manner, while the foliage and in fact all other ornament has, at times, a hard and classic character rather than any great delicacy. It seems to be generally in excellent scale, one piece in good proportion to another.



Mirror in Carved Wood.

* A series of articles written by Mr. William Winthrop Kent, Architect, forming part of "A Treatise on Locks and Builders' Hardware," by Henry R. Towne, President of the Yale & Towne Mfg. Co., and Past President of the American Society of Mechanical Engineers. This book is profusely illustrated and contains more than 1100 pages, 4x6½". John Wiley & Sons, Publishers. Price, \$3.00. It is the intention of the publishers of ARCHITECTURE to reprint one school in each number.

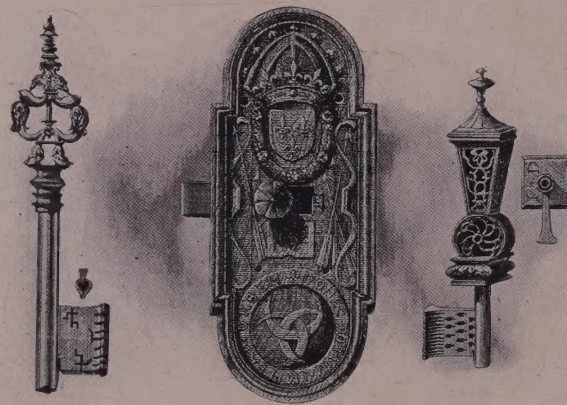
Trophies, weapons, masques, fruit, ribbons are arranged cleverly to cover the panel spaces, and the interlace in many places is introduced with the male and female torso. Beautiful interlaced borders are found on the pages of books of this time, and the embroideries



Wrought Iron Bolts from Various Sources.

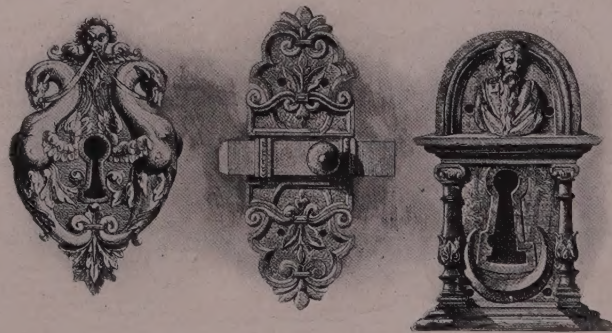
on stuffs are of a rich and elegant character.

Jean Goujon, Philibert de l'Orme, Jean Bullant, Germain Pilon and Pierre Lescot are names which show that the arts flourished in these days in spite of the religious feuds which led up



Hardware from Different Sources.

to the Massacre of St. Bartholomew. Goujon became famous by his nymphs on the Fontaine des Innocentes and other mural carvings, his work on the Louvre and by the staircase of Henry II in



Hardware from Different Sources.

the Louvre. He also worked on the chateau at Anet under de l'Orme, who was Court Architect, and made Anet rather French than Italian to please Diana, who opposed the Italian taste of Catharine. It is to Goujon, however, that we owe much of the

best sculpture, both in figures and ornament. His composition is excellent and in conventionalization also he is always a master to study. The carvings at the Chateau d'Ecouen and at the Hotel Carnavalet give evidence of his great talent.

It is said that only in the chateau of Anet, which runs the gamut of the style of Henry II, the residence of Diana of Poitiers, did Henry show the monogram of D and H. Elsewhere it was C and H.

This is a very fruitful period and brings out emphatically the peculiar and national characteristics of the French designers, as opposed to the Italians, who competed constantly for Court favor. It is a style which deserves much study on account of the excellence of its composition and the proportion of the units which make up the masses.

The work of Bernard Pallissy during these disturbed years was of



Repousse Iron Masks—Louvre.

great importance to art, and the single example given shows how carefully the detail of even ordinary household objects was studied and how beautiful they were made. In this particular piece the interlace is most effectively employed.

Ceramics of this period are rare and valued highly by collectors, some pieces bringing great prices.

It is seldom one finds more interesting examples of design in metal than the iron masques and bolts given on the first page of this article. Evidences of great taste and lavish display have in no school been more frequently shown, and, in fact, the French Renaissance reached under Henry II its highest plane.



Mantel at End of Gallery of Henry II, Fontainebleau.

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(Continued from page 161)

to indemnify the competitors. Ergo, if the jury, appointed by this board, and for whose decisions this board remains responsible, as to the transgression of or deviating from the articles of the programme, awards projects which, according to this programme, might *not* come into consideration, the board of this Carnegie Foundation can be called upon to account for its action."

It seems to us that, accepting the above-mentioned conclusions, there is need for the competitors to consider and discuss what they wish to do under these circumstances.—From *Architectura*, August 11, 1906.

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FINAL COMPETITION.

A RESTAURANT ON THE BORDERS OF A LAKE.

(By M. Louis Bernier.)

This establishment, placed on the hillside of a rolling country, should have its principal entrance on a road following the contour of the lake, and another entrance on a smaller road situated about sixty-five feet above the former one.

Ramps and staircases and paths should make easy access for carriages and people on foot to the different terraces, on which should be placed the main building, its pavilions, the various games, the kiosques, the bosquets, etc.

The principal building should contain on the ground floor a great dining-room and several other rooms and drawing rooms, besides the necessary vestibules, etc.

On the first floor, which should be in direct communication with a roof terrace, there will be private dining-rooms.

On each floor the necessary dependencies, service toilet rooms, etc.

A grand staircase, elevators, service elevators and stairs, and so on.

The kitchens and other quarters for the service should be in a sub-basement situated on a special court.

In the garden there should be a summer café with its dependencies and kiosques for music, several tennis courts, croquet lawns and space for out-of-door games.

Bosquets shall be arranged near the principal building containing the restaurant, and also in other parts of the grounds.

The service buildings near the upper road shall consist of stables, sheds for carriages; garage for automobiles, large service court and a bar for the coachman and servants.

Lodgings for the director and the various employees.

The public will be able to enter the establishment either from the main roadway or from the smaller road.

The distance between the principal road and the inner road is three thousand feet. The width is undetermined.

For the sketches there is required: A block plan at $\frac{1}{128}$ " scale of the restaurant and all the various dependencies, etc., mentioned; also a plan and section of the restaurant and its immediate dependencies at $\frac{1}{32}$ ", and its façade at $\frac{1}{16}$ ".

For the rendu there is required: A plan at $\frac{1}{32}$ " scale showing the restaurant and all the various dependencies, without, however, showing the general layout of the grounds beyond them. Also two plans and a section of the restaurant and its immediate dependencies at $\frac{1}{8}$ " scale and an elevation at $\frac{1}{4}$ ".

By a subsequent letter the requirements for the rendu were changed to the following:

Required for the rendu: A plan at $\frac{1}{32}$ " showing the restaurant and all the various dependencies, without, however, showing the general layout of the grounds beyond them. Also a first story plan and section of the restaurant proper, omitting its dependencies, at $\frac{1}{8}$ " scale, a plan of the second story at $\frac{1}{16}$ " scale, and an elevation at $\frac{1}{4}$ " scale.

LLOYD WARREN,
Chairman Committee on Education.

BOOK REVIEW.

STUDY OF THE ORDERS. Edited by Alfred E. Zapf, S. B. 1906. American School of Correspondence, Chicago. \$12.00.

This Institution is responsible for a number of valuable text books on the subject of Architecture. "The Orders" is a simple treatise of rare excellence and will do much to popularize the system of correspondence instruction.

Compiled by men of recognized ability and authority and comprising a great mass of material gleaned from expensive books and laborious research, it is finally published at a reasonable selling price which places it within the means of a majority of students. We are pleased to give it our mark of approval and appreciation.

"The general method of 'laying out' the Orders is that employed in the Ecole des Beaux Arts, Paris, but simplified. In addition, there are a large number of valuable plates illustrating the methods of Vignola, Palladio, Bühlmann, Mauch, and other authorities. All the plates have been carefully selected, analyzed, and explained by architects of thorough training and wide professional experience. The work consists of over four hundred pages of text 8" x 10" in size, profusely illustrated, and handsomely bound in half red morocco leather, with a Glossary of all the architectural terms in common use—a comprehensive Bibliography of the best books on the subject,—and a full index. The text is supplemented by fifty-eight rare and valuable detailed drawings of the best typical examples of Greek and Roman architecture. These plates are 11" x 15" in size, printed on heavy plate paper and provided with a handsome portfolio convenient for desk use."

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